



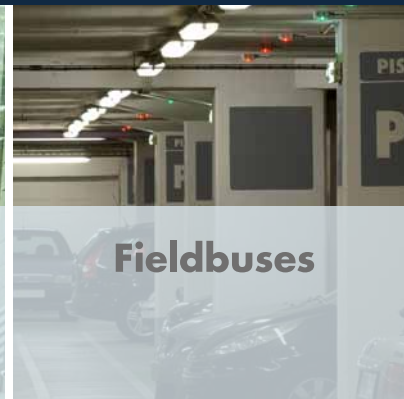
Sensors



Switches



Controls



Fieldbuses

Application notes



Application Note : August 2015

Market involved : Agriculture

Product : RSWT 120mm

Customer : Panel builders

Subject : Increased reliability in reverse osmosis pumps for irrigation systems

CUSTOMER ISSUE :

Reverse osmosis is a process that uses high pressure centrifugal pumps and special membranes (filters) for several applications, such as water desalination, production of drinkable water and rain water purification for irrigation.

The high pressure pump applies the necessary pressure to push water through the membrane, which filters out the salt.

Such systems can be found in places where the power grid could be quite weak.

High reliability as well as low maintenance costs are requested.

OUR SOLUTION :

The RSWT..V110/V111 series is a 3-phase controlled soft starting solution with an algorithm designed to reduce water hammering and pump vibrations during pump starting and stopping. This algorithm is also self-learning and is active at every start and stop so that, in case of load fluctuations, the RSWT will react accordingly, keeping user settings to a minimum.

The RSWT..V110/V111 series is also equipped with electronic overload protection and PTC input to detect overload conditions and/or pump overheating.

A remote alarm reset is also available so that users may activate the reset from a remote location.

The RSWT is designed to operate at temperatures from -20°C to +60°C (>40°C derating applies).

BENEFITS :

- Extremely easy to use – minimal user adjustments required
- Self-learning algorithm ensures that pump starting and stopping is optimised even during load changes
- Highly efficient current reduction with 3-phase control
- Less disturbance to voltage network
- Integrated protection functions increase pump protection even in abnormal conditions
- Wide operational temperature range ensures reliable operation even in harsh conditions
- High number of starts per hour: 20 (at rated conditions)